

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A fluid control device, comprising:
 - a first fluid path and a second fluid path each having a hollow shape;
 - a housing portion formed between said first fluid path and said second fluid path and having a hollow portion with a cross sectional area larger than those of said first and second fluid paths; and
 - a valve member mounted at an opening portion at which said first fluid path communicates with said hollow portion, the valve member having a body and a projection portion,
 - wherein:
 - the body of said valve member is formed of a tubular member which can be inserted into said first fluid path, the tubular member including a side portion having at least one communication portion to allow fluid flow from the first fluid path to the hollow portion, the communication portion of the valve member body portion being a concave portion formed in the side portion of the valve member body portion; and
 - said projection portion is formed at a tip end portion of said tubular member on a side of the hollow portion, and is configured to project towards an inner wall face of said housing portion and have on an inner side of the body a hollow cavity portion which communicates with said communication portion, wherein at least a part of an outer edge portion of said hollow cavity portion sits on the inner wall face of said housing portion to close the fluid flow from the first fluid path to said hollow portion below a predetermined fluid pressure, but allows the fluid flow above a predetermined fluid pressure in such a way that the outer edge portion sitting on the inner wall face of said housing portion is deformed by the fluid pressure towards the hollow portion, thus producing a gap between the edge portion and a base of the hollow portion.

2. (Previously Presented) The fluid control device according to claim 1, wherein the valve member comprises an elastic material.
3. (Previously Presented) The fluid control device according to claim 2, wherein the elastic material is silicon rubber.
4. (Canceled)
5. (Previously Presented) The fluid control device according to claim 1, wherein the projection portion of the valve member body portion has an approximately hemispherical shape on the second fluid path side thereof, and is formed with a cavity portion on the first fluid path side thereof.
6. (Previously Presented) The fluid control device according to claim 5, wherein the cavity portion has a hollow, approximately hemispherical shape.
7. (Previously Presented) The fluid control device according to claim 1, wherein the cavity shape of the hollow portion on the second fluid path side is of an approximately circular cone of which diameter is successively reduced from the first fluid path side toward the second fluid path side.
8. (Previously Presented) The fluid control device according to claim 1 wherein the housing portion is comprised of a first housing member formed by bulging an end of the first fluid path and a second housing member formed by bulging an end of the second fluid path, and is formed through a fitting of said two housing members without using adhesives.
9. (Previously Presented) The fluid control device according to claim 8, wherein the housing portion is configured such that the bulged portion of the second fluid path is fitted into the bulged portion of the first fluid path.

10. (Previously Presented) The fluid control device according to claim 8 wherein the material of the first housing member has a larger thermal contraction compared to the material of the second housing member.

11. (Previously Presented) The fluid control device according to claim 8 wherein the material of the first housing member is polypropylene resin and the material of the second housing member is polycarbonate resin.

12. (Previously Presented) The fluid control device according to claim 1, wherein mutually engageable engaging portions are provided in the end portion of the valve member on the side opposite to its projection portion and in the first fluid path, the valve member being to be placed in the first fluid path, so that the engagement of said both engaging portions cause the valve member to be placed under a tension in the lengthwise direction in the first fluid path.

13. (Previously Presented) The fluid control device according to claim 12, wherein the relationship between the length (c) of the body portion of the valve member and the length (d) from the engaging portion of the first fluid path to the hollow-portion base portion is from 1 : 1 to 1 : 1.25.

14. (Previously Presented) The fluid control device according to claim 12 wherein said (c) is 1.45 cm and said (d) is from 1.45 to 1.8 mm.

15. (Previously Presented) The fluid control device according to claim 1, wherein said valve member is opened by pressure (F) of the fluid flowing from the first fluid path to said valve member of below 0.2 Kg/cm² so that the first fluid path and the hollow portion are communicated for a fluid flow.

16. (Previously Presented) A drug supply line, comprising the fluid control device of claim 1, the drug supply line further comprising:

a drug supply means;
a tubular member extending from said drug supply means and through which the drug flows;
a drug administering means for administering the drug to the human body via said tubular member;
a transducer for measuring the pressure inside said tubular member; and
a pressure-value display means for displaying the signal outputted from said transducer as a pressure value.

17. (Previously Presented) The drug supply line according to claim 16, wherein the drug supply line is an infusion line and the pressure-value display means is a blood-pressure-value display means.